REMARKS

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

The present invention as set forth in **amended Claim 1** relates to a chiral nematic liquid crystal optical element, comprising:

a pair of substrates with transparent electrodes; and

a liquid crystal layer having a memory property interposed between the substrates;

a first resin layer which is provided on one of the transparent electrodes,

said first resin layer having a rubbed vertical alignment surface in contact with the liquid crystal layer;

a second resin layer which is a resin layer selected from the group consisting of a surface layer which has not been subjected to an alignment treatment by rubbing, a vertical alignment layer or a horizontal alignment layer, said second resin layer being provided between the liquid crystal layer and the other of the transparent electrodes;

wherein said liquid crystal layer exhibits a planar state and a focal conic state;

wherein the second resin layer has a surface hardness of B or less in a pencil hardness test.

Amended Claim 5 relates to a chiral nematic liquid crystal optical element, comprising:

a pair of substrates with transparent electrodes; and

a liquid crystal layer having a memory property interposed between the substrates;

a metal-oxide layer provided on at least one of the transparent electrodes;

a first resin layer which is provided on one of the transparent electrodes,

said first resin layer having a rubbed vertical alignment surface in contact with the liquid crystal layer;

a second resin layer which is a resin layer selected from the group consisting of a surface layer which has not been subjected to an alignment treatment by rubbing, a vertical alignment layer or a horizontal alignment layer, said second resin layer being provided between the liquid crystal layer and the other of the transparent electrodes;

wherein said liquid crystal layer exhibits a planar state and a focal conic state;

wherein the second resin layer has a surface hardness of B or less in terms of a pencil hardness test.

New Claims 29 and 30 relate to the liquid crystal optical element according to clam 1 or 5, respectively 1, wherein said second resin layer **consists of a resin**.

As acknowledged by the Examiner, West et al fail to disclose the second resin layer having a surface hardness of B or less in a pencil hardness test as claimed in Claims 1 and 5 of the present invention. See Office Action of May 2, 2006, at page 4, 1st full paragraph and page 7, 1st full paragraph.

In addition, the Examiner has acknowledged that West et al fail to disclose the metal oxide layer on at least one the transparent electrodes as set forth in Claim 5 of the present invention.

Unno et al disclose a liquid crystal device of the photo-writing type (space light modulator-SLM, col. 1, lines 11-14) having a ferroelectric liquid crystal (chiral **smectic** liquid crystal) (col. 1, lines 39 and 53). This type of display is substantially different from the multistable chiral **nematic** display of West et al (col. 6, lines 49-50). Since the materials used are substantially different and since a smetic LC exhibits a layer structure while a nematic LC does not exhibit such layer structure, there is no motivation to combine Unno et al with West et al.

Further, the Examiner has referred to column 6, lines 16-34 of Unno et al to show a resin layer having the claimed pencil hardness. However, the layer of Unno et al is a **charge**

transport layer. In addition to a resin, this layer also contains a charge transporting substance. However, this is different from the second resin layer of Claims 1 and 5 which is simply **a resin layer**.

Including a charge transport layer in the multistable chiral **nematic** display of West et al is not meaningful as the presence of a charge transport material makes the layer conducting which could create defects in the LC of West et al. If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification (*In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

Further, in **new Claims 29 and 30,** the second resin layer **consists of a resin** and thus explicitly excludes additional materials such as a charge transport material.

The combination with Konuma et al does not result in a chiral nematic liquid crystal optical element as claimed in Claim 5 because the proposed combination lacks one rubbed vertical alignment layer (first resin layer) combined with a second resin layer which is a resin layer selected from the group consisting of a surface layer which has not been subjected to an alignment treatment by rubbing, a vertical alignment layer or a horizontal alignment layer, said second resin layer being provided between the liquid crystal layer and the other of the transparent electrodes.

Gotoh et al has been cited to show a driving voltage as in Claim 6. However, the combination of West et al, Unno et al, Konuma et al and Gotoh et al does not result in the claimed invention because the proposed combination lacks one rubbed vertical alignment layer (first resin layer) combined with a second resin layer which is a resin layer selected from the group consisting of a surface layer which has not been subjected to an alignment treatment by rubbing, a vertical alignment layer or a horizontal alignment layer, said second

resin layer being provided between the liquid crystal layer and the other of the transparent electrodes.

Khan et al disclose a liquid crystal device having a chiral nematic liquid crystal (Khan et al, abstract). The Examiner has cited the reference to show insulating layers as in Claim 20. However, Khan et al do not cure the defects of West et al, Unno et al and Konuma et al because there is no alignment as claimed: one rubbed vertical alignment layer (first resin layer) combined with a second resin layer which is a resin layer selected from the group consisting of a surface layer which has not been subjected to an alignment treatment by rubbing, a vertical alignment layer or a horizontal alignment layer, said second resin layer being provided between the liquid crystal layer and the other of the transparent electrodes.

Thus, even a combination of West et al, Unno et al and Konuma et al and Khan et al does not result in the claimed invention.

Therefore, the rejection of Claims 1, 2, 11-14, 16-18 and 27 under 35 U.S.C. § 103(a) over West et al in view of Unno et al, the rejection of Claims 5, 19, 21-23 and 28 under 35 U.S.C. § 103(a) over West et al in view of Unno et al and Konuma et al, the rejection of Claim 6 under 35 U.S.C. § 103(a) over West et al in view of Unno et al and Konuma et al and further in view of Gotoh et al, the rejection of Claim 15 under 35 U.S.C. § 103(a) over West et al in view of Unno et al and Khan et al and the rejection of Claim 20 under 35 U.S.C. § 103(a) over West et al in view of Unno et al and Konuma et al and further in view of Khan et al are believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of these rejections is respectfully requested.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed

representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

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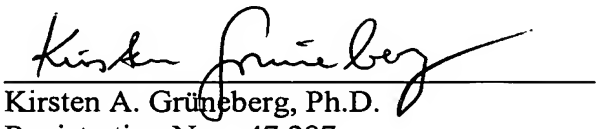

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